

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001735

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7 F02D 41/30; F02D 41/38, F02D 28/00, F02B 1/06, F02B 1/08

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 F02D 42/30, F02B 1/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)

USPTO Full-Text and Image Database; Delphion; Canadian Database; Espacenet  
Search terms such as: "Simulation", "injection", "cylinder pressure", "torque", "converged cylinder pressure", "converged intake flow"

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	D1: EP 0 877 309 B1 (CHENG) 2000-06-21 (21-06-2000)	1-46
A	D2: US 6 286 482 (FLINN) September 11, 2001 (11-09-2001)	1-46

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex

- \* "A" Special categories of cited documents :
- "T" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international-type search  
19 November 2004 (19-11-2004)

Date of mailing of the international-type search report  
21 February 2005 (21-02-2005)

Name and mailing address of the ISA/CA  
Commissioner of Patents  
Canadian Patent Office - PCT  
Ottawa/Gatineau K1A 0C9  
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Information on patent family members

International application No.  
PCT/CA2004/001735

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
EP0877309	11-11-1998	DE69800186D D1 DE69800186T T2 EP0877309 A1 US6236908 B1	27-07-2000 09-11-2000 11-11-1998 22-05-2001
US6286482	11-09-2001	AU4082997 A AU4158097 A CN1233313 A EP0928369 A1 JP2000514526T T US6230683 B1 US6286482 B1 US2001017127 A1 US2002026926 A1 US2002185109 A1 US2003200955 A1 US2004103860 A1 WO9807973 A1 WO9810179 A2	26-03-1998 06-03-1998 27-10-1999 14-07-1999 31-10-2000 16-05-2001 11-09-2001 30-08-2001 07-03-2002 12-12-2002 30-10-2003 03-06-2004 26-02-1998 12-03-1998